

IzoT™ Router 2

Ethernet-FT Router and Local Server
for IzoT and LON Networks



Features

- Enables LonTalk/IP and LON devices on different communications channels to be part of the same community
- Enables BACnet workstations and devices on an Ethernet channel to communicate with BACnet/IP devices on an FT channel
- Provides a RESTful API for rapid Web page development and M2M communications
- Supports custom apps that you develop using the IzoT SDK
- Includes an integrated Ethernet interface for connection to LonTalk/IP-LAN devices, enterprise applications, and Web clients
- Includes an IP-852 router for interfacing with other IP-852 routers and applications
- Includes an LNS-compatible Remote Network Interface (RNI) for interfacing with IzoT Net Server, OpenLNS Server, and LNS Server applications
- Includes an integrated FT interface that can be attached to either an LonTalk/IP-FT or LON FT channel
- Includes a software-enabled FT terminator for the FT interface for simplified FT channel termination
- Provides two USB ports for expansion—each can be used for an external network interface, Wi-Fi adapter, or a USB hub for more expansion
- DIN 43880 8TE compliant package for easy DIN-rail mounting
- Powered by a 9-16 VDC or 9-12 VAC input; power supply included
- IP local and wide area networking protocols and Internet standards include TCP, UDP, IPv4, DHCP, DNS, FTP, ICMP, SNMP, SNTP, HTTP, HTTPS, SSL, RNI, and IP-852
- IP application protocols include LonTalk/IP and HTML

Building Communities of Devices

The IzoT Router is a ready-to-run appliance for connecting IzoT and LON devices on an Ethernet channel with IzoT and LON devices on an FT channel, and for connecting Web pages and enterprise applications to IzoT and LON devices. The IzoT Router automatically forwards packets between the attached Ethernet LAN channel and the attached FT LON channel. The IzoT Router comes with one built-in LON FT interface. You can add additional LON channels to the IzoT Router by plugging in up to four external U60 FT DIN Network Interfaces. You can configure the FT interfaces to communicate with IzoT LonTalk/IP or classic LON ISO/

IEC 14908-1 FT devices (FT 3120, FT 3150, Series 5000 and Series 6000, such as FT 6050). The IzoT Router has a LonTalk/IP-LAN (IP-70) backbone that allows the IzoT Router to communicate directly to IzoT EX Stack and CPM 4200 devices.

The IzoT Router also supports IP-852, RNI, and LonScanner RNI network interfaces.

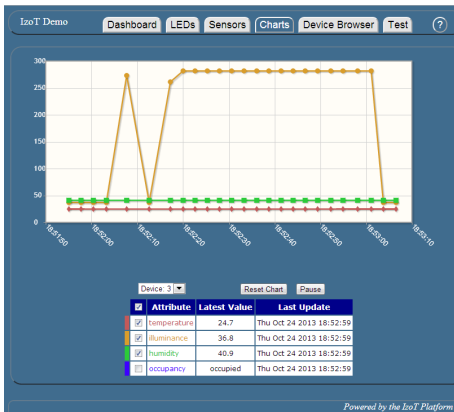
The IzoT Router is available in a model with a BACnet router that allows BACnet/IP workstations and devices on Ethernet to communicate with BACnet/IP devices on the FT channels.

You can expand the IzoT Router by adding a Wi-Fi adapter to support simple setup with a smart phone or tablet.

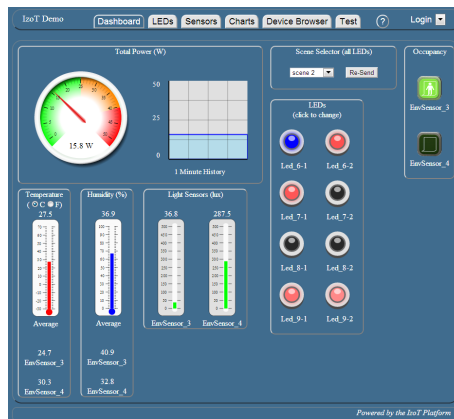
An integrated FT terminator is included that you can enable and disable in the software. This reduces the cost of installing an FT twisted pair installation by eliminating the requirement to wire a separate terminator.

An integrated IzoT Server connects IzoT devices to Web clients, providing users with local Web access to monitor and control the operation of communities of devices. The IzoT Server provides an easy-to-use RESTful API with a low-overhead but powerful interface for discovering devices, monitoring their data, and controlling them via network inputs.

A set of example Web pages is included with the IzoT Router. You can use these Web pages to try out the IzoT Server, to interact with your devices, and to learn the IzoT RESTful API.



A charting page is also included that you can use to monitor and trend datapoints in your IzoT network.



You can use the IzoT SDK to build custom apps to run on the IzoT Router. This enables you to extend the capabilities of the IzoT Router to add value to your IzoT Router deployments. You can develop your custom apps using Python, C++, or C.

Specifications

Hardware Platform

Processor

- TI AM3359 1GHz superscalar ARM® Cortex-A8

Memory

- 2GB eMMC flash memory
- 512MB DDR3 RAM

Connectivity

- RJ-45 10/100 BaseT, auto-selecting, auto-polarity, Ethernet port for device, LAN, and WAN interfaces
- Supports optional USB Wi-Fi adapter
- FT network interface supporting LonTalk/IP, BACnet/IP, custom IP, and native LON interfaces
- 2 USB 2.0 Type A host ports for expansion with a Wi-Fi adapter and flash drives

Controls

- Connect/Service button
- Reset button (recessed)

Indicators

- Power/Wink/Status LED
- Connect/Service LED
- Ethernet Link/Activity LEDs
- FT Tx/Rx LEDs

Operating Input Voltage

- 9-16 VDC or 9-12 VAC

Operating Input Current

- 1.2A max

Temperature

- -10°C to +70°C (operating and non-operating)

Humidity

- 10% to 95% RH @ 50°C

Enclosure

- DIN 43880 8TE compliant enclosure

Dimensions

- 3.51 in. (H) x 5.47 in. (W) x 2.60 in. (D)
- 8.9 cm (H) x 13.8 cm (W) x 6.6 cm (D)

Software Platform

Operating System

- Debian Linux

Integrated Components

- Django Web application framework; Nginx Web server and reverse proxy server; Unicorn Web server gateway interface; SQLite relational database management system; Supervisor process control system

Web Client Interface

- RESTful API supporting XML and JSON

Compatible Web Browsers

- HTML5 compatible Web browsers including Internet Explorer 9, 10, and 11, Chrome, and Firefox on Windows 7 and Windows 8, and Safari 5.1 on iPad Mini with iOS

Application Development Languages

Ordering Information

Model 72300R-140

IzoT Router FT (BACnet routing not included)

Model 72300R-140-BAC

IzoT Router FT with BACnet Routing